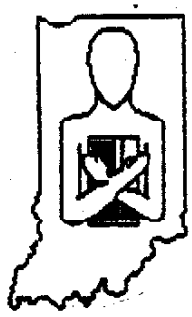

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THE HUGgers
HOOSIER USERS GROUP
People Helping People

AUGUST, 1985 THE HUGgers NEWSLETTER VOLUME 3, NUMBER 5

THE OFFICER'S CORNER

As promised, diskettes containing Freeware have been added to our library. Due to the generosity of Jim Acord, Andy Armstrong, and Bill Lucid, our library has grown by twelve diskettes, seven of those diskettes being of Freeware. This brings me to point, if you have public domain programs which you feel might be of use to other members, donate it to the Users Groups' library! The library is available at both the Monthly Meeting and the South Side Meeting. At other times, it is available at MicroComputers, and by appointment at Dennis Sherfy's.

I'd also like to announce that Bill Cagle, our Vice-President, has moved and has resigned as an Officer of the Users Group. Cag, however, has decided to continue his support of our Newsletter. Bill Lucid has volunteered to assume the duties of Vice-President until our next elections in April, 1986.

We've made many more TI'ers at the Indianapolis Hamfest last month who were unfamiliar with the Hoosier Users Group. Among the new faces we met were members of Cin-Day Users Group of Cincinatti; Kentuckiana Computer Society of Louisville; Decatur 99 Users Group of Decatur, Illinois; Chicago and Fort Wayne Users Groups.

I'll be looking forward to seeing you at the August 11th Monthly Meeting. J.Steven Sims.

THE NEXT MONTHLY MEETING WILL BE
AUGUST 11, 1985
STARTING AT 2:00 PM AT CREATIVE LOGIC.
SEE YOU THERE!

WORKSHOPS: HUGbbs ON-LINE
DISK OPERATIONS

Regional Meetings

South
August 29th at 7:00 pm.

Terre Haute
August 23rd at 7:30 pm.

VOLUNTEERS WANTED!
by Pam Sims

Editor's Note: I need a few live, active members who are knowledgeable on subjects such as Basic, Extended Basic, and other special applications to write articles for our Newsletter. Also needed are members to schedule and/or give workshops. If there are any members who would like to donate a few hours a month to help our Users Group grow, see me at this upcoming meeting.

Inside the Newsletter

Page 2: Wordsearch
Page 3: Library Bits
Page 4: Advertisement of BIT-MAC, a screen dump graphics program of which there will be a workshop in the near future.
Page 5: Magazines the TI99/4A (A compilation of magazines currently in print for the TI99/4A computer user.)
Page 6: Kids Korner, from Australia on Alphabet Recognition
Page 7: Printing from Early Modules and Notes from a Neophyte.
Page 8: Cartridge Cleaning
Page 9 and 10: Tips from the Tigercub

HAPPY BIRTHDAY!

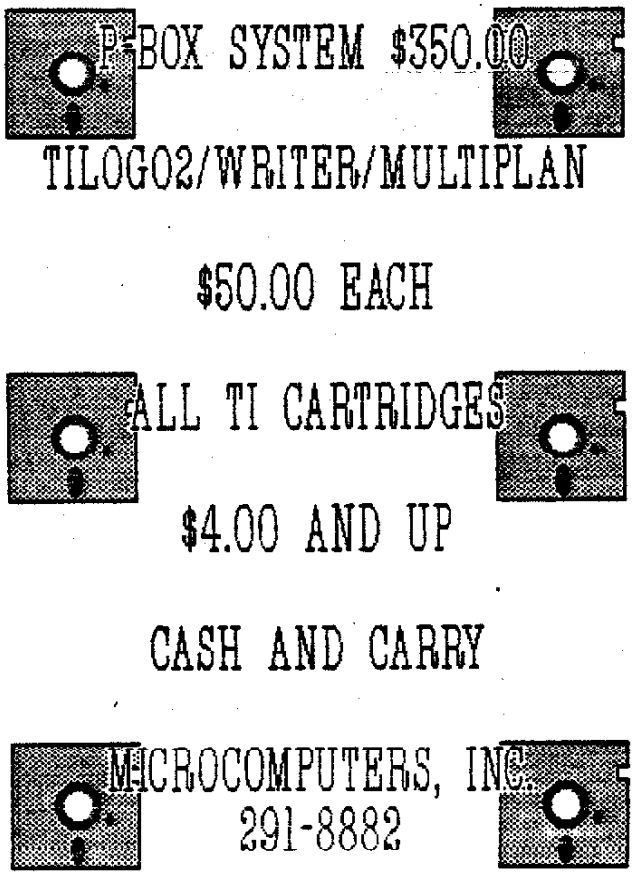
A Happy HUGger Birthday to these members who joined the Hoosier Users Group in August, 1984! Richard Johnson, Richard S. Griffith, Ted Allen, Sheila Smith, Don Donlan, John Ashton, Joseph & Charlotte Godsey, Randy Blackwood, Rich Sceniak, Bob Manville, Greg Goodwin, and Anthony Black.

WELCOME!

The Hoosier Users Group welcomes Robert Summers, Bill Roland and Anthony Miller who joined the group in the past month.

WELCOME BACK!

We would also like to welcome back these renewing HUGgers: Larry Conner, John Stobaugh, Dennis Sherfy, Phil Kurtz, Andy Armstrong, and Lawrence Wisthoff.



REGIONAL NEWS

TERRE HAUTE NEWS

The next Terre Haute regional meeting will be held on Friday, August 23, at 7:30 pm at Vic Kelson's house, 2401 College Ave., Terre Haute. We invite all HUGgers to come and invite a friend from this region.

SOUTH REGIONAL MEETING

The South Regional meeting is scheduled for Thursday evening, August 29th, starting at 7:00 pm at Dennis Sherfy's house. If anyone needs directions to the South meeting location, call me at 881-5918.

WORDSEARCH

Here's a wordsearch which contains 23 BASIC or Extended Basic "CALL" words. Have fun!

```
DOSPGLHUDCALLHCHARBKJAFESMM
ICDNOLACCWQDRSEXHXCNVNERUJJ
CTALAJTAPRAHCLLACRYKEIUYESL
ALPLIMZSWXMFUTHXOISEWSKQNOE
LWKCLDRNOUJNXZGTIHRFGPXOLYC
LCNIOCLLACTCYRYJGCIBKGNVTAA
VMIUDUOGGUPNAGACSAQKDFJLLZL
CDLSDBBLGCLTWLSLPLJFEBALAXL
HULMGYXUOYLROULKKLDAFJCZTUC
AMLSFICINRKUOALJGKQFVHNOGDH
RDAAZWAQNEDACDALOERRARJPOYA
XYCCALLGCHARSYCOEYLREDNICIR
FCWTAALKDXEHZVZUTQSXFPEXURR
PQGEKBLTPDORGLBJLELTFDKEXAR
EAZGYYOEQCALLINITPZBOQEWEKE
TYUPQTAKILFMXRQSKTYVAPFLRNL
AIYSBCDXAMNOISREVLLACHCQOML
CUDLSGZUZUSBOHESZNHGFLWKBFA
OZFAXAFAOEWDVPHOPTDDLYYYWOC
LBHCECUSPWZFLJLWZJKAETHLGNA
LIAYMHLVABQLCDJEZNCJNRRQJPL
LKUPCLHEFXARDNUOSLLACMODNLL
AFSRAVYFKCDJIKOIBHVVQJFYGMA
COTCUPZELLZHSCEOETIRPSLLACC
```

LIBRARY BITS

by Steve Moon

Here are some more programs that are on disk Extended-07. (Once again, please note that "B/" names are for programs that will run under both Console or Extended BASIC; "BC/" for Console BASIC only; and "BX/" for X-BASIC only.):

)))Program name - BX/CARDFIL
Hardware req. - X-BASIC, DISK, & 32K EXP. MEM.

This was taken from COMPUTE!'s Guide to Extended Basic Home Applications on the TI-99/4A - but has been largely re-written. You might like to read the above source, pp. 133-135 & 139-149 in your "local bookstore." Basically (pun?), it maintains a subject file for a bunch of notes of up to 480 characters each. There are sample files (CARDFILE/X (the index) & CARDFILE/D (the notes) on this disk.) Try the various menu options with a filename of "CARDFILE/" to see what happens.

Of special interest may be the SUB-programs: ADDSUBJ (starting line 2120); BLANKLINES (2410); READCARD (2700); GETKEY (3020); & DRAWBORDER (3220). Again, please see the above source for more info.

The BEGIN key can be used to prevent being trapped in most of the menu options (such as having to ADD a new record even though you change your mind). In case you wonder (as I did), the SUB-program at line 2840 removes from the input string those upside-down U's displayed on your screen.

One lacuna in the program is that you can't delete an entry. (You CAN revise the notes, (but not the Subject or Identifier fields)). This assumes you are never going to make a mistake and that your data will never change. I don't know about you, but for me that's nuts. Perhaps someone will accept the challenge to correct this omission.

Program - LOADCARDFIL.
This can be renamed "LOAD" and used to auto-load the above program. Both programs should be on the same disk with your ????????/X (Index) files.

)))Program name - BX/DUMP
Hardware req. - X/BASIC & Disk.

As the name says, this is a file dumper. You may display just the printable ASCII characters or the ASCII or HEX codes for all the characters as well. To quit the program, enter a space as the first character after the file-name prompt. Entering BACK (FCTN 9) at a beep will return you to this prompt. Note that there is a beep in the CALL KEY subroutine and that even if you take the default response, that response is displayed (i.e., "Y" or "N").

)))Program name - BX/MSTRDIR
Hardware req. - X-BASIC, DISK, & 32K EXP. MEM.

This was retrieved from COMPUTE!'s TI Collection, Volume one, pp. 291-303. I made one hell-of-a-lot of changes & additions. Examples: A lot of redundant code removed; DISPLAY and ACCEPT AT's converted to sub-program's (lines 14000+ & 15000-); errors trapped so program doesn't croak when you screw up (lines 70 & 80); pre-scan made around 400% faster.) This program will (in a reasonable amount of time) maintain a master directory of all your disk files. An important feature: Entering a 0 (zero) for any number prompt will return you to the menu. (If you are at the menu, a 0 will quit the program.) You may catalog a maximum of 50 disks and 400 files, but more than 350 files or so will slow things down. If you are updating a disk's directory you will want to: 1) Delete old disk # (Menu #7); 2) Add changed disk # (#2); 3) Sort directory (#8); & 4) Save updated directory (#9). For printing, check the "OPEN" in line 10050 and the escape sequences in line 10060.

)))DISKRUNNER (a fine program recently added to XTENDED-07) will do some things better and others worse than BX/MSTRDIR. Better is that you can print individual disk directories (BX/MSTRDIR could be modified to do this but I haven't had the energy or felt sufficient need); worse is that it will only hold 10 disks per file.

BITMAC disk media software was designed for use with the TI-99/4A home computer. It is written in TMS9900 machine language for the utmost in speed and program function. The program provides bit precision graphics generation and editing. Some of the features are:

Line, rectangle, circle, copy section, mirror, rotate, reverse video, free hand draw, 9 brush sizes, 16 colors, bit "on" color, bit "off" color, screen color, color test area, 40 column text, text on text, text on graphics, 16 color text, upper and lower case, 4 direction bit scrolling, dump to printer (two sizes), save to disk, boolean graphics enhancement, "LIFE" graphics enhancement, second computer input, X Y vector reporting, monochrome and color monitor support, trackball support, single bit erase, single bit placement, block erase, erase colors, erase all, fill, enlarge, reduce, "slide show", "oops" function.

BITMAC is icon driven and is simple to use. Included are extensive documentation, an example coprocessor program and one year warranty.

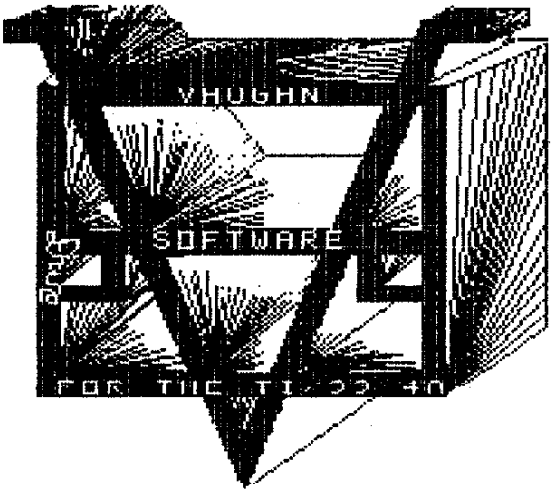
REQUIRED EQUIPMENT: Extended basic, Mini Memory or Editor Assembler module, a display monitor, joysticks, TI-99/4A computer, memory expansion and a disk drive system. THE PROGRAM MAY NOT BE COMPATIBLE WITH SOME VERSIONS OF THE MYARC DISK CONTROLLER.

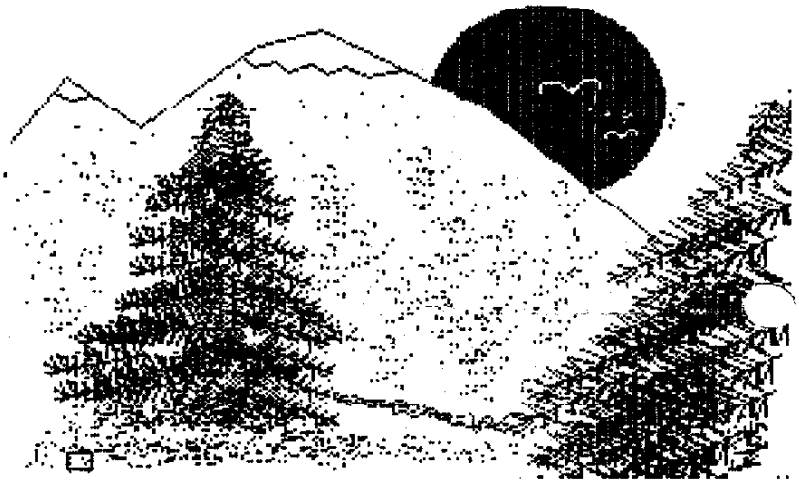
OPTIONAL EQUIPMENT: TI, Gemini or Epson printer, RS232 card, trackball, up to 5 disk drives (limited by the disk controller), second computer (any make) with RS232 interface and cable.

To Order: Send check or money order for $29.95 plus $2.00 shipping and handling to:

VAUGHN SOFTWARE
5460 Harlan #B4
Arvada, CO 80002

For other inquiries please include a self addressed stamped envelope.





BITMAC

By Vaughn Software

For the

TI-99/4A COMPUTER

BITMAC is a trademark of Vaughn Software.
The BITMAC program is a 1984 registered copyright of Vaughn Software.
Vaughn Software is the only authorized manufacturer of BITMAC.

Magazines & the TI99/4A was reprinted from the July, 1985 Newsletter of the Airport Area Computer Club, P.O. Box 710, Coraopolis, PA 15108.

MAGAZINES AND THE TI-99/4A by Bob Dudley

In the March issue of the Pittsburgh Users Group TI newsletter "Peripheral" the editor wrote a satirical review in which he called Home Computer Magazine "by far the worst magazine I have ever seen." Now that is exaggerated of course. The gentleman was expressing his extreme disappointment that the old 99er Magazine has evolved into Home Computer magazine treating the IBM-PC & PC Jr., the Commodore 64, the Apple II and the TI-99/4A. Naturally when the magazine was exclusively devoted to the TI there was a singleness of purpose which appealed to all of us TI-99/4A owners. But I suspect even more that the editor was missing the ads (Home Computer decided to go without ads) which were one of the greatest aids in the old magazine. But even if the magazine had not abandoned ads, it is deluding oneself to believe that there would be the same number of ads there once was. Fifty-five computer magazines went under in 1984! Some of these were definitely worse than Home Computer. The great "shakeout" in computer manufacturers and software publishers means that there is simply far less advertising in 1985. Still, Home Computer Magazine does provide programs for the TI-99/4A. In the latest issue (Volume 5 Number 3) there are 6 software programs and 4 articles on the TI plus a news column. An unusual feature of the magazine is that the programs are available from the publisher on disk or tape for those who do not wish to type them in. Ten issues by subscription cost $25 with two "free" media presentations (choice of tape or disk) included and the others available by subscription if desired. Address: Emerald Valley Publishing Co., P. O. Box 70288, Eugene, OR 97401.

However, the disappearance of 99er Magazine does not mean that there are no magazines just for the TI-99/4A. There are 3 that I know of - all very young in age and much less "professional" in appearance than the old 99er. MICROpendium has worked its way into Volume 2 and perhaps should be treated as the next eldest. It is printed on 8 1/2 by 11 inch newsprint with each issue approximately 36 pages. There is a reasonable balance between advertising and editorial material and the ads do provide information about new products and sources for software and hardware enhancements. The contents of the April 1985 issue should provide some idea of the nature of this publication: Editorial, Letters, Cruising the Forum (column reviewing the online data services like CompuServe), The Ultimate Users Group (TI Forum on CompuServe), Graphics for beginners, 9900 Micro Expansion System by CorComp (review), Disk + Aid (review), Gemini Printers (review), Freeware (column), Newsbytes, User Notes (including a scroll demo program) and Classified Ads. The magazine costs $15/year from MICROpendium, P. O. Box 1343, Round Rock, TX 78680.

Super 99 Monthly is printed from computer print-out without illustrations or advertising. There are 12 8 1/2 by 11 inch pages. The April 1985 issue (#8) included the following: a review of 9900 BASIC, an assembly language programming aid, a how-to-do-it article on adapting Atari/Commodore joysticks to work on the TI, a BASIC appointment reminder program, an XBASIC program to remove a subroutine from a program and merge it into another, a MULTIPLAN macro, a disk catalog for the CorComp controller, FORTH tips, a communications column and news. A subscription is $12/year from Bytemaster Computer Services, 171 Mustang Street, Sulphur, LA 70663.

The newest publication is Mini-Mag 99, printed on 5 1/2 by 8 1/2 inch slick paper with illustrations and ads. The contents of the first issues have been a bit thin as they get started generating the material needed to fill a monthly magazine. The 30 page April issue had the following material: Letters, Plotting on the TI-99/4A Using the Radio Shack CGP-115 Plotter, TI-WRITER Labels and Mailing Lists, 9900 Expansion System (review), In-Out and In-Between (basics of communicating with your 99), a 99 word puzzle, new software releases, news column, and a review reprint from MICROpendium. The magazine costs $20/year from S. O. S. Publishers, 21777 Ventura Blvd. #203, Woodland Hills, CA 91364.

COMPUTE! Magazine semi-regularly provides some material for the TI. The June issue has an original game (a spider tries to find his meals without getting eaten himself), a super-font program in XBASIC, and C. Regena's monthly column (this one has a multiple-choice test program). Other parts of the magazine (such as How To Buy The Right Printer) are of interest to all but the above were specifically for the TI. COMPUTE! costs $24/year from COMPUTE!, P. O. Box 914, Farmingdale, NY 11737.

It should be noted that COMPUTE! is publishing some of the very best books on the TI and presently has 5 titles including game collections, graphics, and assembly languages. The books are new and very well produced - definitely a step ahead of some of the earlier products from other publishers.

In its June issue Family Computing announced it was dropping support for the TI but the July issue still had one small BASIC program for the TI. The magazine is directed at young school children and the programs are very simple.

I suppose that I should point out that I cannot guarantee that the TI-99/4A specific magazines will all survive. The fact that so many computer magazines failed to survive last year certainly points out that it is difficult to make ends meet in this field. Naturally it will require subscriber support for these to continue. If you enjoy reading about your TI give one or more of these a try.

KIDS KORNER

Alphabet Recognition was reprinted from "Bug-Bytes of Australia" via the December, 1984 issue of Topics, Newsletter of the LA 99'ers, P.O. Box 3547, Gardenia, CA 90247.

ALPHABET RECOGNITION

This program was written by L.K.TUTCHINGS to help his son learn the alphabet. It proved to be a big hit at his pre-school too. I think that all the pre-schoolers out there will love it too. It requires Extended Basic and if you have a speech synthesizer, you will also get speech with it.

```
100 CALL SCREEN(8)
110 FOR COL==3 TO 8 :: CALL C
OLOR(COL,2,1):: NEXT COL
120 DISPLAY AT(4,4)ERASE ALL
:"1 ALPHABET RECOGNITION" ::
 DISPLAY AT(6,4):"2 ALPHA AT
TACK"
130 DISPLAY AT(8,4):"3 CLOSE
 OF PROGRAM" :: DISPLAY AT(1
8,2):"PUSH No KEY OF YOUR CH
OICE"
140 CALL KEY(0,K,S):: IF S=0
 THEN 140 :: IF K=ASC("1"")TH
EN 150 :: IF K=ASC("2")THEN
470 :: IF K=ASC("3")THEN 850
 ELSE 140
150 DISPLAY AT(12,4)ERASE AL
L:"ALPHABET RECOGNITION" ::
FOR DE=1 TO 300 :: NEXT DE
160 CALL CLEAR
170 PRINT "THE IDEA IS TO PR
ESS THE KEY ON THE KEYBOARD
THAT       MATCHES THE LETTE
R THAT IS  GOING ACROSS THE
SCREEN"
180 PRINT "THE COMPUTER WILL
 LET YOU   KNOW IF IT IS COR
RECT. IF IT IS CORRECT THEN
ANOTHER    LETTER IS RANDOML
Y SELECTED"
190 PRINT "UNTIL YOU HAVE CO
RRECTLY GOT 40 RIGHT": : :"P
RESS ANY KEY TO START"
200 CALL KEY(0,K,S):: IF S=0
 THEN 200
210 CALL CLEAR
220 RANDOMIZE
 230 FOR A=1 TO 40
240 X=INT(RND*25)+65
250 CALL SCREEN(2)
260 CALL MAGNIFY(2)
270 FOR C=5 TO 8
280 CALL COLOR(C,16,2):: NEX
T C
290 FOR Q=4 TO 25 STEP 4
300 DISPLAY AT(24,Q):CHR$(X)
:: DISPLAY AT(1,Q):CHR$(X)::
 NEXT Q
 310 CALL SPRITE(#1,X,16,86,2
0,0,10)
320 CALL SAY(CHR$(X))
330 CALL KEY(0,K,S):: IF S=0
 THEN 330 :: IF K[ ]X THEN 36
0 ELSE 390
340 CALL DELSPRITE(#1):: NEX
T A
350 GOTO 100
360 DISPLAY AT(20,7):"WRONG
TRY AGAIN!"
370 CALL SAY("UHOH.THAT IS N
OT RIGHT, TRY AGAIN")
380 DISPLAY AT(20,7)SIZE(16)
:"                " :: GOTO
310
390 DISPLAY AT(20,12)SIZE(5)
:"RIGHT"
400 Z=INT(RND*5)+1 :: ON Z G
OTO 410,420,430,440,450
410 CALL SAY("GOOD WORK,GO S
OME MORE"):: GOTO 460
420 CALL SAY("THAT IS CORREC
T, CAN YOU DO IT AGAIN"):: GOTO 46
430 CALL SAY("RIGHT. GO AGAI
N"):: GOTO 460
440 CALL SAY("GOOD, WHY STOP
 NOW"):: GOTO  460
450 CALL SAY("YES.GO AGAIN")
460 DISPLAY AT(20,12)SIZE(5)
:"     " :: GOTO 340
470 CALL CLEAR
480 DISPLAY AT(12,8):"ALPHA
ATTACK" :: DISPLAY AT(20,2):
"WANT INSTRUCTIONS Y OR N?"
490 CALL KEY(0,K,S):: IF S=0
 THEN 490 :: IF K[ ]ASC("Y")T
HEN 550 ELSE 500
500 DISPLAY AT(2,2)ERASE ALL
:"THE OBJECT IS TO SHOOT DOW
N": :"THE ALPHABET IN ORDER"
510 DISPLAY AT(6,2):"USE THE
 JOYSTICK AND FIRING": :"BUT
TON. THERE ARE 52 BULLETS"
520 DISPLAY AT(11,1):"SO DO
NOT WASTE THEM...." :: DISPL
AY AT(13,5):"GO TO IT! GOOD
LUCK!"
530 DISPLAY AT(20,5):"PUSH A
NY KEY TO START"
540 CALL KEY(0,K,S):: IF S=0
 THEN 540 ELSE 550
550 CALL CLEAR
560 CALL SCREEN(2)
570 CALL MAGNIFY(1)
580 RANDOMIZE
590 FOR S=1 TO 26
600 R=INT(RND*120)+1 :: C=IN
T(RND*246)+10 :: CS=INT(RND*
15)+1
610 CALL SPRITE(#S,64+S,INT(
S/2)+3,R,C,0,CS)
620 NEXT S
630 CALL SPRITE(#27,94,16,17
0,120)
640 AMMO=52
650 FOR T=1 TO 26
660 FOR CL=3 TO 8 :: CALL CO
LOR(CL,16,1):: NEXT CL
670 CALL POSITION(#27,R,D)
680 CALL JOYST(1,X,Y):: Y=0
690 CALL KEY(1,K,S):: IF S=0
 THEN 730 :: IF K=18 THEN CA
 LL SPRITE(#28,46,16,R,D,-25,
0):: CALL SOUND(100,-1,0)::
AMMO=AMMO-1
700 IF AMMO=0 THEN 820
710 CALL COINC(#T,#28,8,C)::
 CALL POSITION(#28,R1,D1)
720 IF C=-1 THEN 750 :: IF R
1[9 THEN CALL DELSPRITE(#28)
ELSE 710
730 DISPLAY AT(23,2):"AMMO="
;AMMO
740 CALL MOTION(#27,-Y,X*6):
: GOTO 670
750 CALL SOUND(250,-7,0):: C
ALL DELSPRITE(#T):: CALL DEL
SPRITE(#28)
760 DISPLAY AT(24,1+T):CHR$(
64+T)
770 IF T]26 THEN 790
780 NEXT T
790 CALL DELSPRITE(ALL):: CA
LL CLEAR :: CALL SCREEN(2)
800 DISPLAY AT(10,1):"WELL D
ONE WANT TO PLAY AGAIN" :: D
ISPLAY AT(12,11):"Y OR N" ::
 DISPLAY AT(14,1):"YOU HAD";
AMMO;"BULLETS LEFT"
810 CALL KEY(0,K,S):: IF S=0
 THEN 810 :: IF K[ ]ASC("Y")T
HEN 100 ELSE 550
820 CALL DELSPRITE(ALL):: CA
LL CLEAR :: CALL SCREEN(2)
830 DISPLAY AT(10,1):"SORRY-
OUT OF AMMO PLAY AGAIN" :: D
ISPLAY AT(12,11):"Y OR N"
840 CALL KEY(0,K,S):: IF S=0
 THEN 840 :: IF K[ ]ASC("Y")T
HEN 100 ELSE 470
850 DISPLAY AT(12,11)ERASE A
LL:"GOODBYE" :: CALL SAY("GO
ODBYE")
860 FOR DE=1 TO 1000 :: NEXT
DE :: CALL CLEAR :: END
```

PRINTING FROM EARLY MODULES

Editor's Note: The following article was reprinted from the May, 1985 issue of The ROM Newsletter, Newsletter of the Users Group of Orange County, 17301 Santa Isabel Street, Fountain Valley, CA 92708 via the April, 1985 issue of "MINI-MAG 99".

"Kent Maxwell found a way to be able to print the Weight Control and Nutrition Module to a parallel printer. (Editor's note: TI produced these modules prior to the availability of an RS232 card with a PIO output, so their menus did not provide for same.)

The procedure is as follows:

1. When setting up your files, tell the computer that you will not be using a printer, then create your data files accordingly.

2. When reviewing the files, put in any fictitious printer device name (i.e., RS232/8) and the computer will indicate DEVICE NOT FOUND. At this time, enter PIO, and the computer will allow access to a parallel printer.

The procedure may vary slightly between the various early modules, but the key is to avoid a printer identification in the data unit process. Enter the device name when recalling and reviewing the previously entered data.

Kent Maxwell is an avid TI enthusiast who is employed with the VA Hospital in Sepulveda, California on the security force; and is also a member of Tex-Comp's Technical Consulting group."

NOTES FROM A NEOPHYTE

By Sharon Martin

Editor's note: The following article was reprinted from the May, 1985 Newsletter of the Central Jersey 99 Computer Club, P.O. Box 673, Bricktown, NJ 08723.

Well, there are not enough articles for the newsletter and I don't have any other newsletters here to copy. So you lucky people will get a little note on my experiences in computing. The title is apt. I don't have very much knowledge about the computer and absolutely none in the technical area. Yesterday I stopped at Radio Shack and asked for a modem. They had two. One was $60 and one was $100. I asked if they would work with the TI. He said to bring in the manuals and he would tell me. He said he didn't understand very technical. Now, I can relate to that!! I asked which manual he would need. I have tons. They are all stored neatly away. Would he like the disk drive manual or the one for the PE box or the one for the RS232 or the TEII thing? He didn't know. I love it! He's the one who is supposed to know! Do I know? Of course not! I just explained how untechnical I am. And people ask why I'm in a computer club! That is a perfect example. I just go to the meeting and ask which modems are compatible(I'm picking up the lingo too!) and I can ever ask which is the best and where to get it. Members always know the best place for the best price.

So, what do I do with my computer? I can play games, of course,(my all time favorite is Tombstone City I think of them as couples who have babies. Split the couples and they'll never have those babies!)

I have always liked a challange. Everything on the computer is a problem and you feel such satisfaction when you solve it! I am in the middle of programming a program to help in grocery shopping(which I hate). Of course, I have been in the middle of it for months now but that's ok. What's the hurry. I'll still hate grocery shopping next year. The program is based on the supermarket's list of where everything is located in the store. I will be able to keep inventory and also the weekly items (the ones that always need replacing). I should include coupons too, but my excuse of forgetting them is easier. It's such a waste--my husband and kids cut them out so carefully for me to use! Anyway, when done I should have a list of what I need to buy in order of the aisles starting with aisle one.

I also use a couple of the cartridges for home use. Financial Decisions is always fun to play with. Should we buy another house to save on taxes or take out a loan for the kids education etc. I like Personal Record Keeping for recording and printing out my programs and location and sometime I will get around to deleting all that I don't use. I do my checkbook on PRK and it works well.

I use TI-Writer for work (My son or I can type his reports on it and get an automatic A)and Multiplan too. I even made up my business letterhead using the transliterate command. Fun. Multiplan is great for payroll taxes and expenses incurred in my business. Every month I add more and at the end of the year have a record for tax returns.

Probably the best thing about my computing is a sense of accomplishment. I did it all-by-myself type of thing.

What are you doing on your computer? Write it up and give us a disk. People are interested!

REPRINT

****

*CIU6:0485 CARTRIDGE CLEANING - by Ron Rutledge *

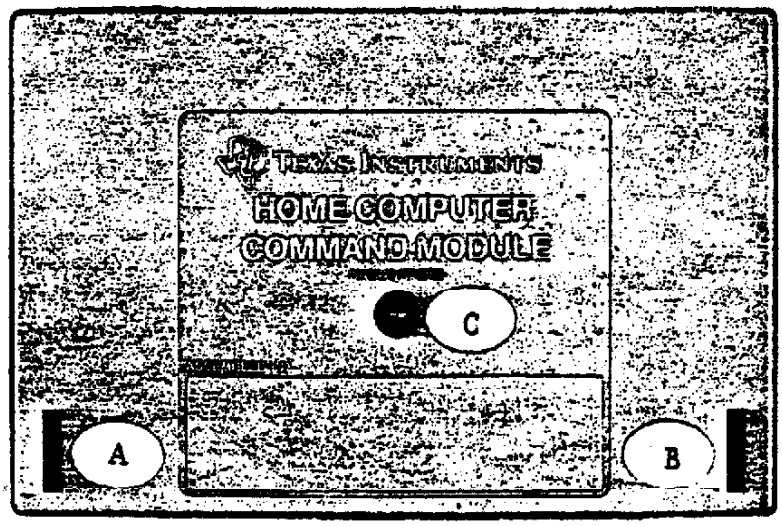
****

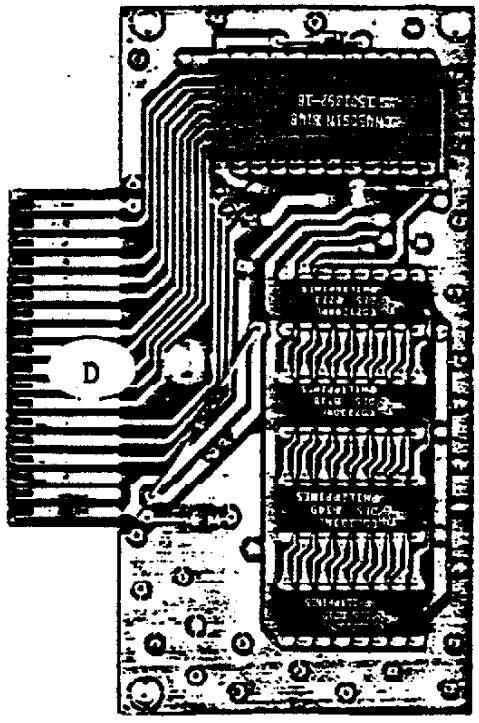
Dirty contcts can screw-up any electrical device and the 4A is not an exception. The only place you are fairly likely to run into this problem is in using command modules. Both the module contacts and the port itself can become dirty but cleaning the port itself is a big job as you have to dis-assemble the console. The good news is that cleaning the cartridge will almost always suffice and can be done quickly without any special tools or cleaners. All you need is a regular screwdriver, some sort of rag, a standard pencil eraser, and in some cases a medium phillips screwdriver.

Remove the screw from "C" if there is one. Then pry the clips in slots "A" and "B" outward to pop open the cartridge. If there is a clip in "C" pry it back after "A" and "B" are loose. If it should bend off don't worry, it won't affect the performance of your module.

The module board can now be removed. Do this carefully and note how the spring-loaded "door" is assembled if there is one so that you can put it back together if it pops out. Once you have the board removed take your rag (a kleenex will work but something cloth is much better) and rub off any residue from the contacts, shown as "D". Remember to do the contacts on both sides if that particular module has them. Once the worst is removed take any soft rubber eraser and "erase" the contacts until they become dry, clean and shiny. You need to do only about the outer half of the contacts as that is more than ever gets used (you can see the scratch marks in the picture below). Once this is done simply put the cartridge back together and go. Some symptoms of dirty contacts are the console locking-up, strange errors where no occured before, etc (my XB cartridge giving me a syntax error when there was non for example). Don't jump to clean a cartridge on your first error, it could be alot of things like static, not having the module in tight, or a number of other things. But if you find you have a continuing problem cleaning the contacts is quick and free and may correct what was wrong.

Cartridge Cleaning was reprinted from the April, 1985 issue of The 4A Forum, Newsletter of the Central Iowa Users Group, P.O. Box 3043, Des Moines, Iowa 50316.





TIPS FROM THE TIGERCUB

022

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The entire contents of Tips from the Tigercub Nos. 1 through 14, with more added, are now available as a full disk of 50 programs, routines and files for just $15.00 postpaid!

Nuts Bolts is a diskfull of 100 (that's right, 100!) IBasic utility subprograms in MERGE format, ready for you to merge into your own programs. Contents include 13 type fonts, 14 text display routines, 12 sorts and shufflers, 9 data saving and reading routines, 9 wipes, 8 pauses, 6 music, 2 protection, etc., and now also a tutorial on using subprograms, all for just $19.95 postpaid!

And I have about 140 other absolutely original programs in Basic and IBasic at only $3.00 each!(plus $1.50 per order for casette, packing and postage, or $3.00 for diskette, PPM) Some users groups charge their members that much for public domain programs! I will send you my descriptive catalog for a dollar, which you can then deduct from your first order.

This challenge was printed in Tips 021 -

```
100!The Unprintable Unkeyabl
e Program!
110!To shuffle the numbers 1
 to 255 into a random sequen
ce without duplication
120!The strings contain the
ASCII characters 1 to 127 an
d 128 to 255
130!Most of the ASCII charac
ters below 32 or above 159 c
annot be input from the keyb
oard
140!So how was this program
 programmed?
150 M$="
          !"#$%&'()*+,-./0
123456789:;(=)?@ABCDEFGHIJKL
MNOPQRSTUVWXYZ[\]^_`abcdefgh
ijklmnopqrstuvwxyz{|}~"
160 M2$="




170 M$=M$&M2$
180 L=LEN(M$):: RANDOMIZE ::
 X=INT(L*RND+1):: N=ASC(SEG$
(M$,X,1)):: M$=SEG$(M$,1,X-1
)&SEG$(M$,X+1,LEN(M$))
190 PRINT N;:: IF LEN(M$)=0
THEN STOP ELSE 180
```

And here is the answer - It was written by a program that writes a program! Key this in and run it to create a MERGE format disk file. Then type NEW, then type MERGE DSK1.LONGSTRING and you will have a RUNable program consisting of lines 150-170 of the puzzle!

```
100 OPEN #1:"DSK1.LONGSTRING
",VARIABLE 163
110 LN=100 :: GOSUB 190 :: A
$=L$&"M$"&CHR$(190)
120 FOR J=1 TO 127 :: C$=C$&
CHR$(J):: NEXT J :: A$=A$&CH
R$(199)&CHR$(127)&C$&CHR$(0)
130 PRINT #1:A$
140 GOSUB 190 :: B$=L$&"M2$"
&CHR$(199)
150 FOR J=128 TO 255 :: B$=B
$&CHR$(J):: NEXT J :: B$=B$&
CHR$(199)&CHR$(128)&B$&CHR$(
0)
160 PRINT #1:B$
170 GOSUB 190 :: F$=L$&"M$"&
CHR$(190)&"M$"&CHR$(184)&"M2
$"&CHR$(0)
180 PRINT #1:F$ :: PRINT #1:
CHR$(255)&CHR$(255):: CLOSE
#1 :: END
190 L$=CHR$(INT(LN/256))&CHR
$(LN-256*INT(LN/256)):: LN=L
N+10 :: RETURN
```

Now type in the remaining lines, and you will have a speeded-up version of the Tigercub Scramble which was published in Tips #10. It is still not as fast as the CALL PEEK versions but is much more useful because you can modify it to scramble a sequence of any length anywhere between 1 and 255. For example, to shuffle the numbers 100 to 150 into a random sequence without duplication, just add a line 175 M$=SEG$(M$,100,50).

The method of writing a "program that writes a program" was fully explained by John Clulow in the 99er magazine Vol. 1 Nos. 3 and 4. It is a little-used but very valuable technique.

For instance, Tips#9 contained the following routine to turn the alphabet upside-down.

```
100 FOR CH=33 TO 127 :: CALL
 CHARPAT(CH,CH$):: FOR J=1 T
O 16 STEP 2 :: X$=SEG$(CH$,J
,2)&X$ :: NEXT J :: CALL CHA
R(CH,X$):: X$="" :: NEXT CH
110 INPUT A$ :: GOTO 110
```

The only trouble with that is that it takes about 50 seconds to run. Try this instead -

```
100 FOR CH=33 TO 127 :: CALL
 CHARPAT(CH,CH$):: FOR J=1 T
O 16 STEP 2 :: X$=SEG$(CH$,J
,2)&X$ :: NEXT J :: CALL WRI
TE(CH,X$):: X$="" :: NEXT CH
1000 SUB WRITE(CH,X$):: IF F
LAG=1 THEN 1010 :: FLAG=1 ::
 OPEN #1:"DSK1.WRITE",OUTPUT
,DISPLAY ,VARIABLE 163 :: LN
=3000 :: GOSUB 3000
1010 X=X+1 :: L$=L$&CHR$(200
)&CHR$(16)&X$ :: IF X<5 AND
CH<127 THEN L$=L$&CHR$(179):
: SUBEXIT
1020 X=0 :: PRINT #1:L$&CHR$
(0):: L$="" :: IF CH=127 THE
N 1030 :: GOSUB 3000 :: SUBE
XIT
1030 PRINT #1:CHR$(255)&CHR$
(255):: CLOSE #1 :: GOTO 301
0
3000 L1=INT(LN/256):: L2=LN-
256*L1 :: L$=CHR$(L1)&CHR$(L
2)&CHR$(147):: LN=LN+10 :: R
ETURN
3010 SUBEND
```

RUN that, type NEW, then MERGE DSK1.WRITE, and you will have a program consisting of DATA statements containing the hex codes for all the upside-down characters. Add a line 100 FOR CH=33 TO 127 :: READ CH$ :: CALL CHAR(CH,CH$):: NEXT CH, and you can turn everything upside-down in only 12 seconds.

Someone sent me a classified ad, clipped from an unknown publication, which read -

TI-WRITER COMPANION. Loaded with ingenious ways to make your TI-Writer more effective. Well written. Send $2.50 to Dr. Bill Browning, 7541 Jersey Avenue North, Brooklyn Park, MN 55428. Money back guarantee.

I sent off my money and have just received 29 pages, 3-hole punched, loaded with useful and ingenious tips and ideas for getting more out of TI-Writer. I recommend it - it's worth twice the money and then some!

The K-Town newsletter recently published a utility routine that is so useful that I want to pass it on to everyone. If a program is not resequenced after it is modified, this will compare

it with the original and prepare a MERGE format file of all the changes, for the use of others to update their copy.

```
100 !$$$$$$$$$$$$$$$$$$$$$$$$
110 !$  COMPARE PROGRAM     $
120 !     by Mike Dodd      $
130 !$$$$$$$$$$$$$$$$$$$$$$$$
131 ! In k-Town 99'er V.2 #1
      April 1985
140 !Version 85.0406.1IB
      Requires disk drive.
      Compares two programs,
      gives list of all diff-
      erences.
150 !SAVE old program in
 MERGE format (SAVE DSK1.(o
 ldfilename),MERGE). SAVE up-
 dated program in MERGE for-
 mat(SAVE DSK1.(newfilename)
,MERGE)
160 !RUN this program, answe
 r prompts for OLD FILE name,
 NEW FILE name, and a differ
 ent OUTPUT FILE name.
170 !When finished, type NEW
, then MERGE DSK1.(outputfil
ename) and ENTER
180 !Can be MERGED into othe
 r copies of OLD program to
 update them
190 DEF @(@$)=ASC(SEG$(@$,1,
 1))*256+ASC(SEG$(@$,2,1))
200 A$=CHR$(255)&CHR$(255)::
 DISPLAY AT(1,1)ERASE ALL:"O
 LD    FILE:": :"NEW    FILE:
 ": :"OUTPUT FILE:"
210 ACCEPT AT(1,13)BEEP:B$ :
 : ACCEPT AT(3,13)BEEP:C$ ::
 ACCEPT AT(5,13)BEEP:D$ :: OP
 EN #1:B$,INPUT ,VARIABLE 163
 220 OPEN #2:C$,INPUT ,VARIAB
 LE 163 :: OPEN #3:D$,OUTPUT,
 VARIABLE 163
230 LINPUT #1:@$ :: LINPUT #
 2:E$ :: F$=SEG$(@$,1,2):: G$
 =SEG$(E$,1,2):: A=@(F$):: B=
 @(G$)
240 IF F$=A$ AND G$=A$ THEN
 CLOSE #1 :: CLOSE #2 :: PRIN
 T #3:A$ :: CLOSE #3 :: STOP
250 IF B>A THEN PRINT #3:F$&
 CHR$(131)&" ##DELETED LINE #
 #"&CHR$(0):: LINPUT #1 :: @$
  :: F$=SEG$(@$,1,2):: A=@(F$
 ):: GOTO 240
260 IF A>B THEN PRINT #3:E$
 :: LINPUT #2:E$ :: G$=SEG$(E
 $,1,2):: B=@(G$):: GOTO 240
270 IF @$<>E$ THEN PRINT #3:
 E$
280 GOTO 230
```

Thanks to some ideas from Joyce Corker, I have made some more improvements to the Tigercub Menuloader, and I have used the above utility routine to list all the changes made since it was published in Tips#15.

```
100 !by A. Kludge/M. Gordon/
 T. Boisseau/J. Peterson/etc.
 modified in Tips #22
102 OPTION BASE 1 :: DIM P$(
 127),VV(127),VX(127):: GOTO
  110
105 @,A,A$,B,C,D$,FLAG,I,J,K
 ,KB,KK,N$,NM,P$,PG$(),Q$,S,S
 T,T$(),TT,VT,VV(),VX(),W$,X,
 X$,K2,S2
106 CALL INIT :: CALL LOAD :
 : CALL LINK :: CALL PEEK ::
 CALL KEY :: CALL SCREEN :: C
 ALL COLOR :: CALL CLEAR :: C
 ALL VCHAR :: CALL SOUND :: !
 @P-
150 ! ##DELETED LINE ##
160 T$(1)="d/f" :: T$(2)="d/
 v" :: T$(3)="i/f" :: T$(4)="
 i/v" :: T$(5)="pro" :: ON WA
 RNING NEXT
170 IMAGE ###
180 DISPLAY AT(1,4):"TIGERCU
 B MENU LOADER"
210 D$="DSK1." :: OPEN #1:D$
 ,INPUT ,RELATIVE,INTERNAL ::
  INPUT #1:N$,A,J,K :: DISPLA
 Y AT(1,2)SIZE(27):SEG$(D$,1,
 4)&" - Diskname= "&N$;
230 FOR X=1 TO 127 :: IF X/2
 #<>INT(X/2#)THEN 260
240 DISPLAY AT(24,1):"Type c
 hoice or # for more #" :: AC
 CEPT AT(24,27)VALIDATE(DIGIT
 )SIZE(-3):K :: IF K=# THEN 2
 50 :: IF VV(K)<>5 THEN 411 :
 : IF K>0 AND K<NN+1 THEN 420
  ELSE 240
290 DISPLAY AT(X+4,2):USING
 170:NN :: DISPLAY AT(X+4,6):
 P$ :: PG$(NN)=P$ :: DISPLAY
 AT(X+4,18):USING 170:J :: DI
 SPLAY AT(X+4,22):T$(ABS(A))
291 VV(NN)=ABS(A):: VX(NN)=A
 BS(B)
295 X$="  "&STR$(B):: DISPLA
 Y AT(X+4,26):SEG$(X$,LEN(X$)
 -2,3):: VT=VT+J
350 DISPLAY AT(X+6,1):"  C
 hoice?" :: ACCEPT AT(X+6,16)
 SIZE(3)VALIDATE(DIGIT):K ::
 IF K<>NN AND K<>NN+1 THEN 41
 #
410 IF K<1 OR K>127 OR LEN(P
 G$(K))=# THEN 320
411 IF VV(K)=5 OR(VV(K)=4 AN
 D VX(K)=254)THEN 420
412 ON ERROR 417 :: CALL CLE
 AR :: OPEN #2:D$&PG$(K):: CA
 LL SCREEN(16)
413 LINPUT #2:W$ :: IF EOF(2
 )THEN 416 :: PRINT W$
414 CALL KEY(#,K,S):: IF S=#
  THEN 413
415 CALL KEY(#,K2,S2):: IF S
 2<1 THEN 415 ELSE 413
416 CLOSE #1 :: CLOSE #2 ::
 END
417 DISPLAY AT(12,1#):"UNLIS
 TABLE" :: CALL SOUND(200,110
 ,#):: RETURN 400
430 ON ERROR 417 :: CALL INI
 T :: CALL PEEK(-31952,A,B)::
  CALL PEEK(A#256+B-65534,A,B
 ):: C=A#256+B-65534 :: A$=D$
 &PG$(K):: CALL LOAD(C,LEN(A$
 ))
```

The Menu Loader will now list up to 127 programs and files, showing the number of sectors in each and the file type, record type and record length of each file. It will stop at the end of each page, and continue on a default value of #, or will stop for selection when any key is pressed. It gives disk name, number of sectors used and available. It adds up sectors actually used and gives a warning if all sectors are not accounted for. It will load and run any program which can be loaded from Extended Basic, displaying the program being loaded. It will delete any program or file, after first displaying the filename and requesting verification. It will list any listable file to the screen, pausing on any key input, and can be very easily modified to list to a printer. If a file is not listable, it will inform you so, and restart the menu selection. It has the pre-scan option to speed it up.

Fairly often, the disk directory will lose track of one or a few sectors during the process of loading records, even though the Disk Manager showed all 358 were initialized. That's why I put the checking routine in the Menu Loader. The figure shown as "used" is actually 358 minus the number of sectors still available, and is checked against the total sectors of all files.

The loss of a few sectors is no serious matter, but once in a great while you may notice that the "available" and "used" sector quantities have obviously been reversed. I have found that this is a signal that the disk is about to go haywire and you had best back it up immediately!

Programs and files are loaded in the first available sector, and continued in the next available sector. If a number of small files are deleted from a disk, and a long file is then loaded, it may thus be fractured into many parts. If you have a work disk on which you continually add and delete files of various lengths, it will become badly fractured. This can cause disk errors, and it also badly overworks your drive. It is a good idea to recopy your work disk occasionally - file by file, not sector by sector with a quick copier.

MEMORY FULL! - Jim Peterson

FORTH DECOMPILER

Gives the Definition of FORTH Words.

by Bill Jones, Indy

Lots of times I've been testing out a program and created a test word in FORTH to try out what I'm working on. Since I usually enter it from the keyboard rather than store it on the disk, I sometimes forget how I invented the work. This little program can bring back the definition of the word I created or one that is already compiled in the system. It's a pretty neat trick that follows the words backward and gives them back to you. This particular procedure was written by Jim Vincent of the Milwaukee Area users group, but I found it listed in the L.A. 99ers group newsletter. I'm passing it along to the HUGgers just as it was listed. Jim's style is pretty compressed and I haven't made any attempt to expand it for clarity.

Also this month, I've been working on a routine to convert FORTH screens into display 80 files that TI-WRITER can read. If you've ever wanted to send FORTH code to someone else via modem you know how useful that can be! I will be presenting that program to the FORTH interest group at the next meeting and you'll see the listing here next month. It features special instructions to strip carrage returns that TI-WRITER inserts as well as the end of file at the end. Along with it, I'll be giving a good tutorial on how to make FORTH read and write regular disk files.

NEWSLETTER GLEANINGS

by Jim Ellis

I reveiwed some of the newsletters, etc. that have arrived in the mail. All of them have something of interest to any and all. I had some difficulty, but think I have some info that will be of interest to several...

From the CHICAGO-AREA TI-99/4 USER'S GROUP comes the announcement of their third annual TI-Computer Faire, to be held in the Ironwood Room at Triton College 2000 N. 5th Av., River Grove, IL on Nov. 2, 1985 from 10:00 A.M. TO 5:00 P.M. Admission to members of TI-User's groups is $1. General admission is $2 at the door.

From Osram Industries of Victoria, Canada comes info about their RAMPORT (tm) that has 8K CMOS RAM with battery backup. It expands system memory to 40K. It also has a feature to back up non-banked ROM only cartridges to disk with some restrictions.

From 99 ASSEMBLY SOFTWARE comes a letter announcing their SOUND DIGITIZER program. It will allow ANY sound to stored on disk with the ability to be played through your tape recorder. It requires disk drive, 32K, cassette recorder.

From TEXTAMENTS of Patchogue, NY comes the ad for a drawing program called TI-ARTIST (tm) from INSCEBOT Inc. It requires disk drive one of the usual modules for loading. It will dump a screen to Epson compatible, Okidata (standard or IBM), or GP-100 printers. It is priced at $34.95 plus $2 shipping and handling.

Also, from Myarc comes Extended Basic Level IV, in module form. It features, all TI XB features, execution up to 3 times faster , 40 COLUMN text mode, other commands, such as, DRAW, FILL, CIRCLE, many more.

Price not stated. For more info on any of these contact Pam Sims or myself.

```
Screen 150
( FORTH word decompiler - JWV 7-NOV-84 ) BASE->R HEX
-FIND (.") DROP DROP 2- CONSTANT
ADQ -FIND LIT DROP DROP 2- CONSTANT ALIT -FIND BRANCH DROP DROP
2- CONSTANT ABRAN -FIND 0BRANCH DROP DROP 2- CONSTANT AZBRAN
 ( DITTO)
: .DQ 2E EMIT 22 EMIT 20 EMIT ;
: .Q 22 EMIT 20 EMIT ;
: DQ? DUP 2+ @ ADQ = IF .DQ 4 + DUP COUNT TYPE DUP C@ + DUP 2 MOD IF 1- THEN .
THEN ;
: :? DUP @ 8334 = ; ( TESTS IF WORD STARTS WITH DOCOLON )
: ;? DUP @ @ 8340 = ; ( TEST IF WORD IS SEMIS )
: P? DUP6@ 2- = ; ( TEST IF WORD HAS @ AS A PRIMATIVE DEF)
: D? @ DUP @ 06A0 = SWAP 2+ @ 832E = AND ; ( TEST FOR DOES>)
: .ID 2+ NFA ID. ; ( PRINT WORD NAME )
: UN: -FIND IF DROP 2- :? IF CR . : " DUP .ID BEGIN 2+ ;? IF ." ; " CR DROP 0
ELSE DUP @ :? OVER P? OR OVER D? OR IF .ID ELSE U. THEN DQ? THEN DUP 0= UNTIL
DROP ELSE ." Not a colon def'd word" THEN ELSE ." No such word" CR THEN ;

R->BASE ( ) ( ) ( ) ( )
```

We wish to give credit to the PUGET SOUND 99'ERS who printed this All Purpose Handy Dandy Reference sheet in their APRIL 85 Newsletter.

QUICK REFERENCE SHEET

COLOR CODES

COLOR	VALUE
TRANSPARENT	1
BLACK	2
MED. GREEN	3
LT. GREEN	4
DARK BLUE	5
LT. BLUE	6
DK. RED	7
CYAN	8
MED. RED	9
LT. RED	10
DK. YELLOW	11
LT. YELLOW	12
DK. GREEN	13
MAGENTA	14
GRAY	15
WHITE	16

PATTERN IDENTIFIER CONVERSION TABLE

0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	0	0	0	8
1	0	0	1	9
1	0	1	0	A
1	0	1	1	B
1	1	0	0	C
1	1	0	1	D
1	1	1	0	E
1	1	1	1	F

ERROR CODES

FIRST	COMMAND OR STATEMENT
0	OPEN
1	CLOSE
2	INPUT
3	PRINT
4	RESTORE
5	OLD
6	SAVE
7	DELETE
9	EOF

SECOND	TYPE OF ERROR
0	DRIVE NOT FOUND
1	DEVICE or FILE WRITE PROTECTED
2	BAD OPEN ATTRIBUTE
3	ILLEGAL OPERATION
4	OUT OF SPACE
5	ATTEMPT TO READ PAST END OF FILE
6	DEVICE ERROR or HARDWARE ERROR
7	FILE ERROR - File or disk does not exist

ASCII CODES

CODE		CODE		CODE		CODE		CODE		CODE		CODE	
32		48	0	64	A	80	P	96	a	112	p	128	
33		49	1	65	B	81	Q	97	b	113	q	129	
34		50	2	66	C	82	R	98	c	114	r	130	
35		51	3	67	D	83	S	99	d	115	s	131	
36	!	52	4	68	E	84	T	100	e	116	t	132	
37	"	53	5	69	F	85	U	101	f	117	u	133	GO
38	#	54	6	70	G	86	V	102	g	118	v	134	GOTO
39	$	55	7	71	H	87	W	103	h	119	w	135	GOSUB
40	%	56	8	72	I	88	X	104	i	120	x	136	RETURN
41	&	57	9	73	J	89	Y	105	j	121	y	137	DEF
42	'	58	:	74	K	90	Z	106	k	122	z	138	DIM
43	(	59	;	75	L	91	[	107	l	123	{	139	END
44	)	60	<	76	M	92	\	108	m	124	|	140	FOR
45	*	61	=	77	N	93	]	109	n	125	}	141	LET
46	+	62	>	78	O	94	^	110	o	126	~	142	BREAK
47	,	63	?	79	P	95	_	111	p	127	DEL	143	UNBREAK
48	-	64	@	80	Q	96	`	112	q	128		144	TRACE
49	.	65	A	81	R	97	a	113	r	129		145	UNTRACE
50	/	66	B	82	S	98	b	114	s	130		146	INPUT
51		67	C	83	T	99	c	115	t	131		147	DATA
52		68	D	84	U	100	d	116	u	132		148	RESTORE
53		69	E	85	V	101	e	117	v	133		149	RANDOMIZE
54		70	F	86	W	102	f	118	w	134		150	NEXT
55		71	G	87	X	103	g	119	x	135		151	READ
56		72	H	88	Y	104	h	120	y	136		152	STOP
57		73	I	89	Z	105	i	121	z	137		153	DELETE
58		74	J	90	[	106	j	122	{	138		154	REM
59		75	K	91	\	107	k	123	|	139		155	ON
60		76	L	92	]	108	l	124	}	140		156	PRINT
61		77	M	93	^	109	m	125	~	141		157	CALL
62		78	N	94	_	110	n	126		142		158	OPTION
63		79	O	95	`	111	o	127		143		159	OPEN
64		80	P	96	a	112	p	128		144		160	CLOSE
65		81	Q	97	b	113	q	129		145		161	SUB
66		82	R	98	c	114	r	130		146		162	DISPLA
67		83	S	99	d	115	s	131		147		163	IMAGE
68		84	T	100	e	116	t	132		148		164	ACCEPT
69		85	U	101	f	117	u	133		149		165	ERROR
70		86	V	102	g	118	v	134		150			
71		87	W	103	h	119	w	135		151			
72		88	X	104	i	120	x	136		152			
73		89	Y	105	j	121	y	137		153			
74		90	Z	106	k	122	z	138		154			
75		91	[	107	l	123	{	139		155			
76		92	\	108	m	124	|	140		156			
77		93	]	109	n	125	}	141		157			
78		94	^	110	o	126	~	142		158			
79		95	_	111	p	127	DEL	143		159			
80		96	`	112	q	128		144		160			
81		97	a	113	r	129		145		161			
82		98	b	114	s	130		146		162			
83		99	c	115	t	131		147		163			
84		100	d	116	u	132		148		164			
85		101	e	117	v	133		149		165			
86		102	f	118	w	134		150					
87		103	g	119	x	135		151					
88		104	h	120	y	136		152					
89		105	i	121	z	137		153					
90		106	j	122	{	138		154					
91		107	k	123	|	139		155					
92		108	l	124	}	140		156					
93		109	m	125	~	141		157					
94		110	n	126		142		158					
95		111	o	127		143		159					
96		112	p	128		144		160					
97		113	q	129		145		161					
98		114	r	130		146		162					
99		115	s	131		147		163					
100		116	t	132		148		164					
101		117	u	133		149		165					
102		118	v	134		150							
103		119	w	135		151							
104		120	x	136		152							
105		121	y	137		153							
106		122	z	138		154							
107		123	{	139		155							
108		124	|	140		156							
109		125	}	141		157							
110		126	~	142		158							
111		127		143		159							
112		128		144		160							
113		129		145		161							
114		130		146		162							
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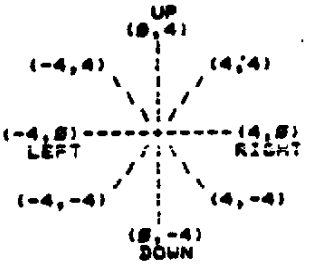
CHARACTER SETS

SET	ASCII CODES
0	30-31
1	32-39
2	40-47
3	48-55
4	56-63
5	64-71
6	72-79
7	80-87
8	88-95
9	96-103
10	104-111
11	112-119
12	120-127
13	128-131
14	136-143
15	144-151\BASIC
16	152-159/ONLY

CALL KEY VALUE OF KEYSTROKES

CODE	KEYSTROKE
1	FCTN 7
2	FCTN 4
3	FCTN 1
4	FCTN 2
5	FCTN -
6	FCTN 6
7	FCTN 3
8	FCTN 5
9	FCTN D
10	FCTN X
11	FCTN E
12	FCTN 8
13	ENTER
14	FCTN 5
15	FCTN 9

JOYSTICK RETURN VALUES



CONTROL CODES

ARC	PRESS	COMMENTS
1	CTRL A	START OF HEADING
2	CTRL B	START OF TEXT
3	CTRL C	END OF TEXT
4	CTRL D	END OF TRANS.
5	CTRL E	INQUIRY
6	CTRL F	ACKNOWLEDGE
7	CTRL G	BELL
8	CTRL H	BACKSPACE
9	CTRL I	HORIZ. TAB
10	SHFT/ENTR	LINE FEED
11	CTRL K	VERTICAL TAB
12	CTRL L	FORM FEED
13	ENTER	CARRIAGE RETURN
14	CTRL N	SHIFT OUT
15	CTRL O	SHIFT IN
16	CTRL P	DATA LINK ESCAPE
17	CTRL Q	DEVICE CONTROL 1
18	CTRL R	DEVICE CONTROL 2
19	CTRL S	DEVICE CONTROL 3
20	CTRL T	DEVICE CONTROL 4
21	CTRL U	NEG. ACKNOWLEDGE
22	CTRL V	SYNCHRONOUS IDLE
23	CTRL W	END OF TRANSMIS.
24	CTRL X	CANCEL
25	CTRL Y	END OF MEDIUM
26	CTRL Z	SUBSTITUTE
27	CTRL .	ESCAPE
28	CTRL H	FILE SEPARATOR
29	CTRL J	GROUP SEPARATOR
30	CTRL ;	RECORD SEPARATOR
31	CTRL ?	UNIT SEPARATOR
127	SHIFT V	DELETE CHARACTER

EXTENDED BASIC STATEMENTS

ACCEPT	DISTANCE	KEY	ON WARNING	SCREEN
CHAR	END	LET	OPEN	SOUND
CHARPAT	ERR	LINK	OPTION BASE	SPSET
CHARSET	FOR	LINPUT	PATTERN	SPRITE
CLEAR	GCHAR	LOAD	PEEK	STOP
CLOSE	GOSUB	LOCATE	POSITION	SUB
COINC	GOTO	MAGNIFY	PRINT	
COLOR	HCHAR	MOTION	RANDOMIZE	
DATA	IF THEN	NEXT	READ	
DEF	IMAGE	ON BREAK	REM	
DELSPRITE	INIT	ON ERROR	RESTORE	
DIM	INPUT	ON GOSUB	RETURN	
DISPLAY	JOYST	ON GOTO	SAY	

CALL LOADS

ADDRESS	PARAMETERS	DESCRIPTION
-32768	POKE 0-255	RATE of FLASH of CURSOR
-31788	POKE 192	DISABLE SPRITE action
-31884	PEEK X,Y	Returns to Title Screen
	POKE X,Y	
-31886	POKE 16	DISABLE QUIT KEY(Fctn =)
	POKE 32	DISABLES SOUND
	POKE 64	DISABLES AUTOSPRITE MOTION
-31868	POKE 4	Goes to Console BASIC after 'NEW' is typed
-31868	POKE 0	Runs DSK1.LOAD
-31878	POKE 0-28	Highest # SPRITE in motion
-31885	POKE 43,255	Disables Disks,NEW +re.mem
-31731	POKE 0/128	Unprotects/Protects progrm
-31962	POKE -2	Returns to TITLE SCREEN
-31762	POKE -56	Runs DSK1.LOAD
-31952	PEEK A,B,C,D	Recovers program with LOAD
-28672	PEEK A	9=Speech Syn. 8=No Speec

HOOSIER USERS GROUP DIRECTORY

HOOSIER USERS GROUP OFFICERS

President.....Steve Sims 631-7255
Vice-President.....Bill Lucid 291-3995
Secretary.....Barb Uhrig 357-8268
Treasurer.....Bill Jones

COMMITTEE CHAIRPERSONS

Regional Centers:
South.....Dennis Sherfy 881-5918
West Indiana..Vic Kelson 812-234-5533

Documents.....Don Donlan 882-4544
Membership.....Pam Sims 631-7255
Newsletter.....Pam Sims 631-7255

MONTHLY MEETING LOCATION

Creative Logic
8240 Indy Lane
Indianapolis, IN 46224

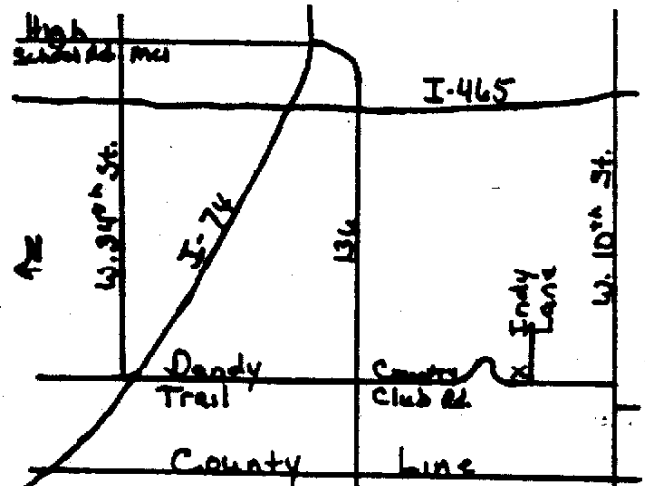
(About 1800 North Country Club Road)

NEWSLETTER EXCHANGE

The Hoosier Users is participating in a Newsletter Exchange program with other TI Users Groups. This offer is made with the understanding that, with proper credit, your Users Group can reprint articles from the Hoosier Users Group Newsletter, and with proper credit, we can reprint articles from other TI Users Groups Newsletters.

PRINTOUTS

Library listings can be ordered for $.25 & a 6x9 self addressed envelope with $.66 postage. The HUGbbs Reference Guide can be ordered for $.50 and a 4x9 self addressed envelope with $.22 postage. Please send orders to our P.O. Box. SORRY, PRINTOUTS WILL BE SENT TO ACTIVE MEMBERS ONLY!



HUGbbs INFORMATION

317-631-994A

The HUGbbs operates on a 24 hour basis.

SPONSOR THE HUGbbs: Any member or retail business can sponsor the HUGbbs. For a $5.00 donation, you get 5 (40 column) lines on the Log-On Title Screen for a week (or for a $10.00 donation, you get 10 (40 column) lines) plus a 24 line by 40 character ad in the Sales option of the File Module. To sponsor the HUGbbs, send a check or money order to our P.O. Box (or turn in at our Monthly Meeting) specifying how many weeks (and how many lines) you want to sponsor, your name (or company name), address, phone, what you want to say, and the week (and an alternate week) you want the ad to appear.*

BACK ISSUES

Back Issues purchased at the monthly meeting is $1.00 each. Mail order price is $1.50 per Newsletter (postage included). Orders will be filled within 3 weeks of receipt by the Documents Committee.

ADVERTISING POLICIES

There will be no charge for advertisements submitted to the HUGger Newsletter by members (for private sale only). Format for the advertisements is 45 characters wide by 10 lines long. The Ad should be typed or hand printed exactly how it is to appear in the Newsletter. Deadline for an ad to appear in next month's Newsletter is the 2nd Saturday of the month.*

For companies who wish to advertise in the HUGger Newsletter, our rates are as follows:

Pre-Printed Inserts (one page) $20.00
One Full Page (one sided) Ad: $25.00
One Half Page Ad: $13.00
One Quarter Page Ad: $7.00

All ads must be in a ready to print condition. Advertisements must be in our P.O. Box before the 2nd Saturday of the month to appear in the following month's Newsletter.*

***NOTE:** The Officers of the Hoosier Users Group reserve final approval on all advertisements submitted for the HUGger Newsletter and the HUGbbs. The Officers and the Newsletter committee are not responsible for typographical errors due to illegible advertisements. All proceeds are accepted as donations to the Hoosier Users Group.

TIME DATED
AUG 6 1985
MATERIAL

HOOSIER USERS GROUP
P. O. BOX 2222
INDIANAPOLIS, IN 46206-2222

FORWARDING AND ADDRESS
CORRECTION REQUESTED

Bulk Rate
U. S. Postage
PAID
Indianapolis, IN
Permit No. 6440

APPLICATION FOR MEMBERSHIP

Below you will find an application for membership to the Hoosier Users Group. Active membership entitles you to the Newsletter, up and download on the HUGbbs, attendance and voting rights at regular club meetings, access to the HUGger Library of Programs, special club activities and special guest speakers for one year. Subscribing members will receive the NEWSLETTER only.

Make check or money order payable to HOOSIER USERS GROUP. Send completed application to:

HOOSIER USERS GROUP
P. O. Box 2222
Indianapolis, IN 46206-2222

please print cut on dotted line

Check One:

Active Member
New: $20_____
Renewal: $15_____

Subscribing Member
New: $10_____
Renewal: $7.5_____

Amount Enclosed _____

#_____ D_____
S_____ O_____

TODAY'S DATE_____

NAME_____

ADDRESS_____APT #_____

CITY_____STATE_____ZIP_____

PHONE (____)____-_____

INTERESTS/ COMMENTS_____

_____